FIG. 1

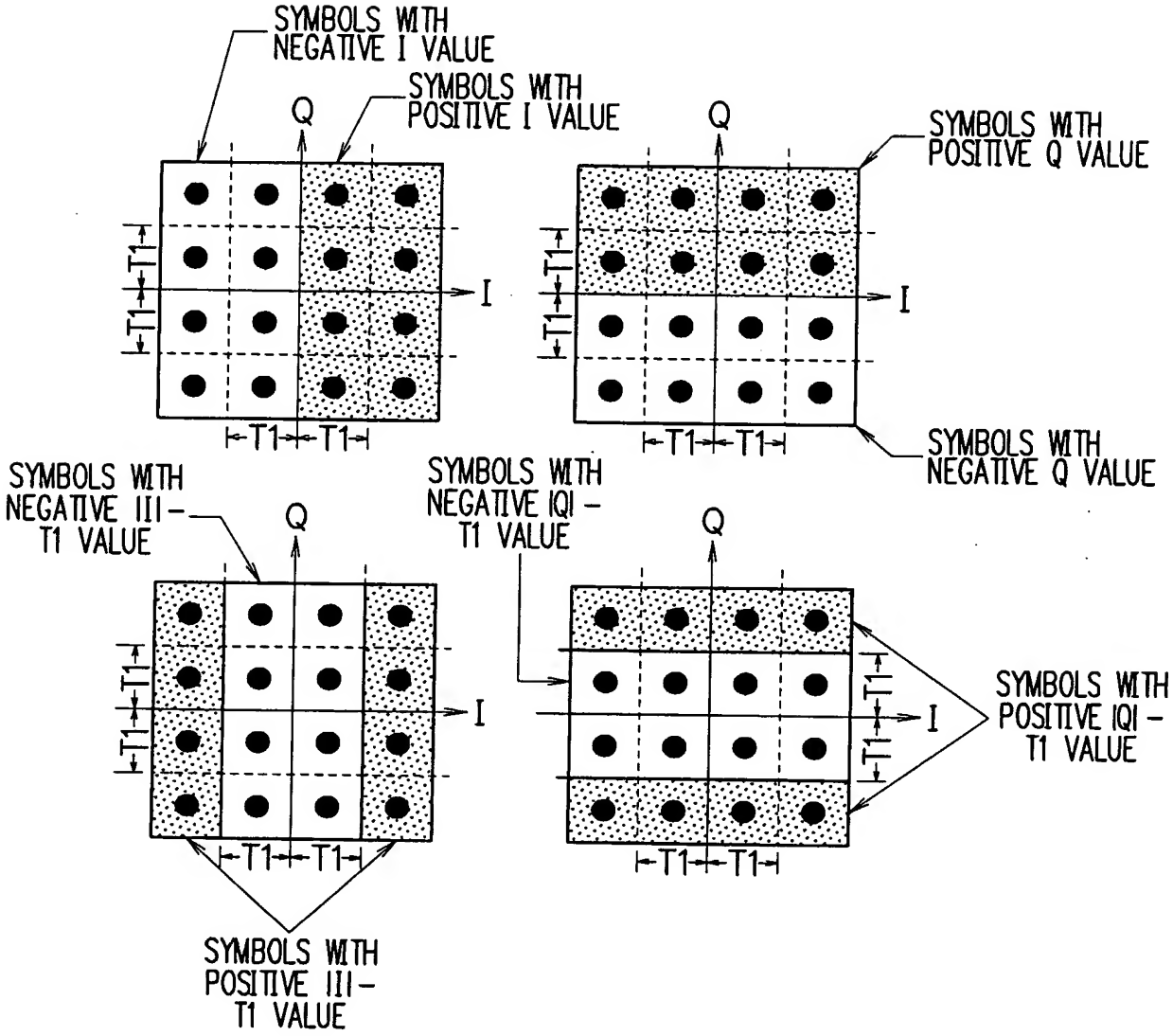

SYMBOLS WITH NEGATIVE I VALUE
SYMBOLS WITH POSITIVE I VALUE
SYMBOLS WITH POSITIVE Q VALUE
SYMBOLS WITH NEGATIVE Q VALUE
SYMBOLS WITH NEGATIVE |I| - T1 VALUE
SYMBOLS WITH NEGATIVE |Q| - T1 VALUE
SYMBOLS WITH POSITIVE |I| - T1 VALUE
SYMBOLS WITH POSITIVE |Q| - T1 VALUE
Q
I
T1

FIG. 2

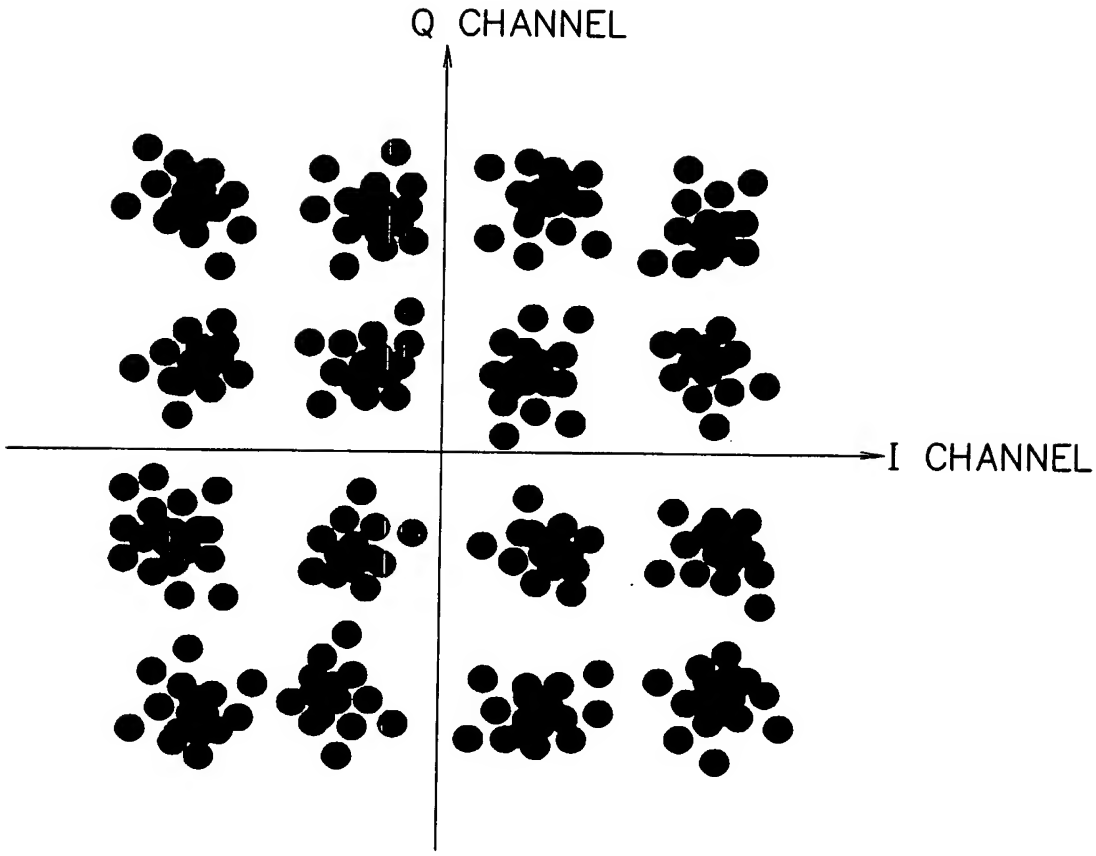


FIG. 3

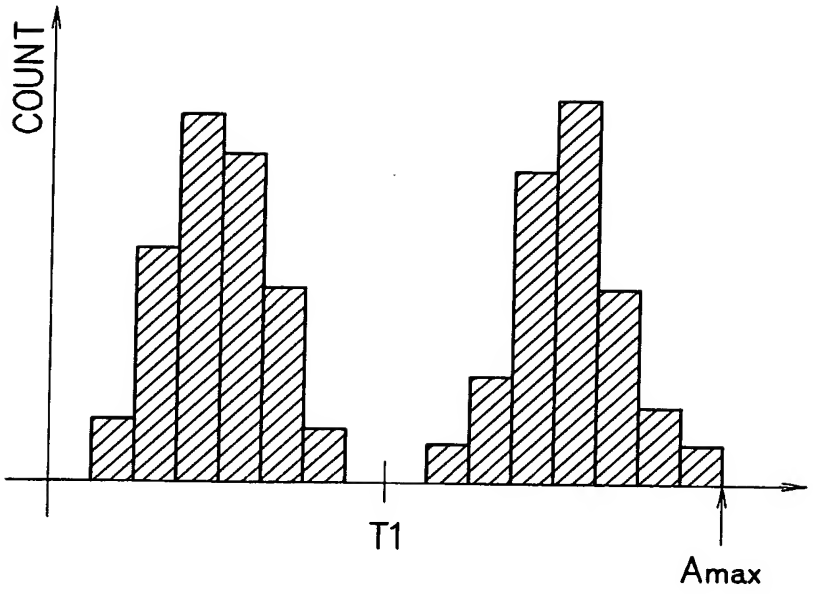


FIG. 4

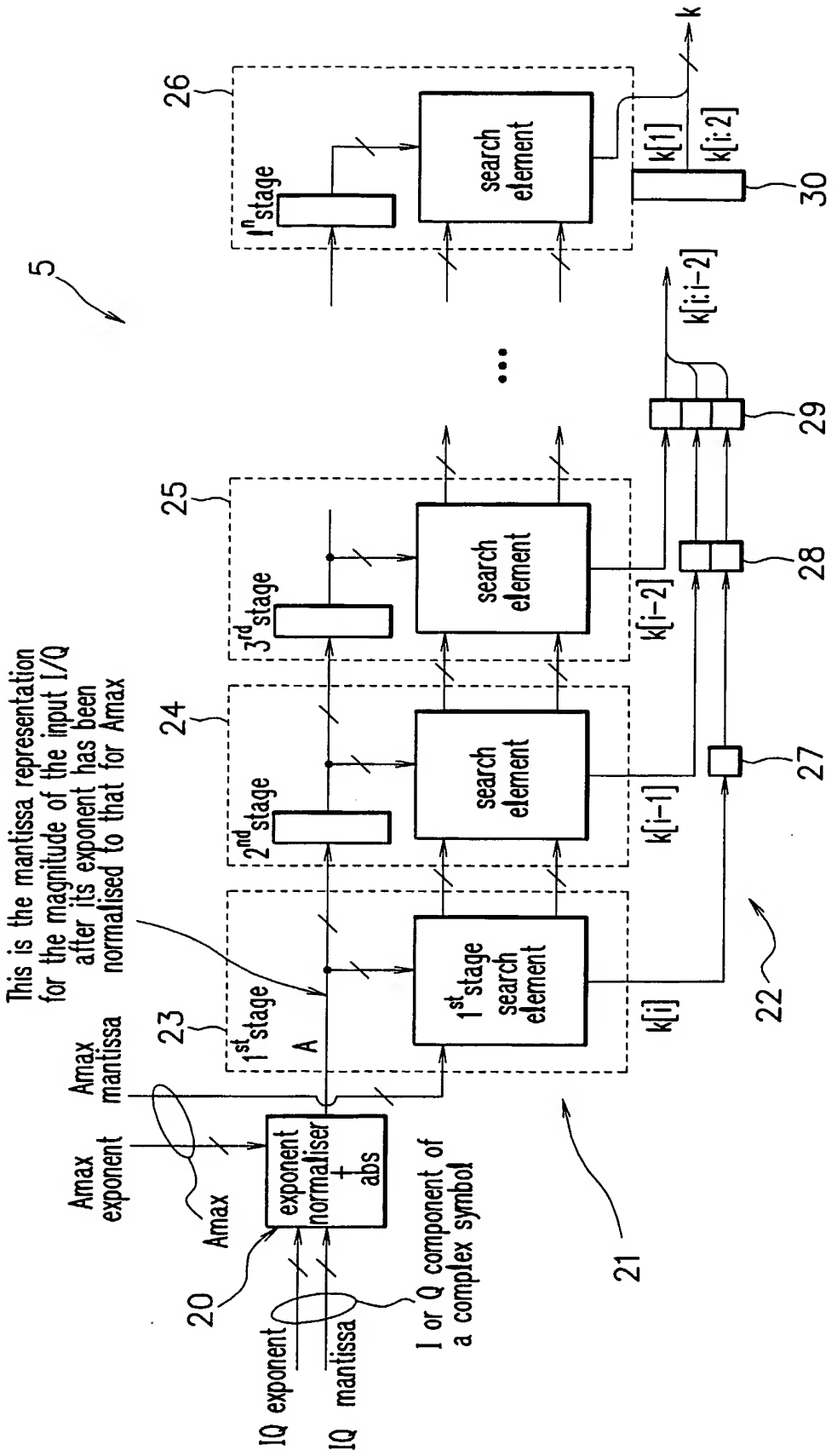

IQ exponent
IQ mantissa
I or Q component of a complex symbol
exponent normaliser + abs
Amax
Amax exponent
Amax mantissa
This is the mantissa representation for the magnitude of the input I/Q after its exponent has been normalised to that for Amax
A
1st stage
2nd stage
3rd stage
nth stage
1st stage search element
search element
search element
search element
search element
k[i]
k[i-1]
k[i-2]
k[i:i-2]
k[1]
k[i:2]
k
20
21
22
23
24
25
26
27
28
29
30
5

FIG. 5

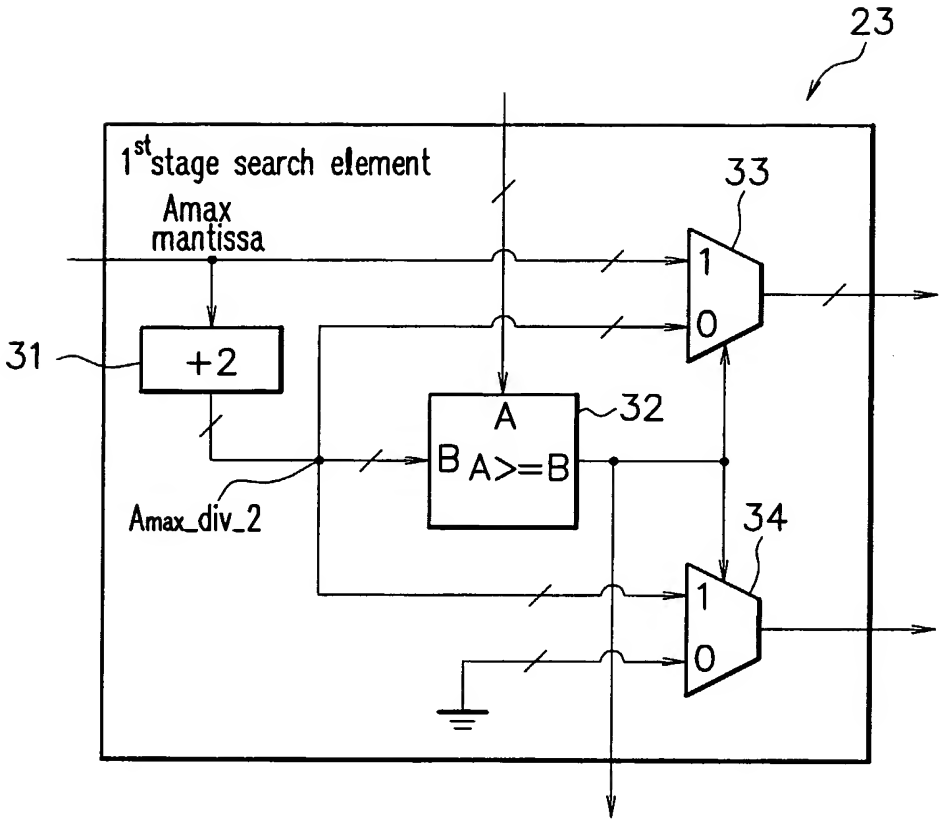

23
1st stage search element
Amax
mantissa
33
1
0
31
+2
A
B A>=B
32
Amax_div_2
34
1
0

FIG. 6

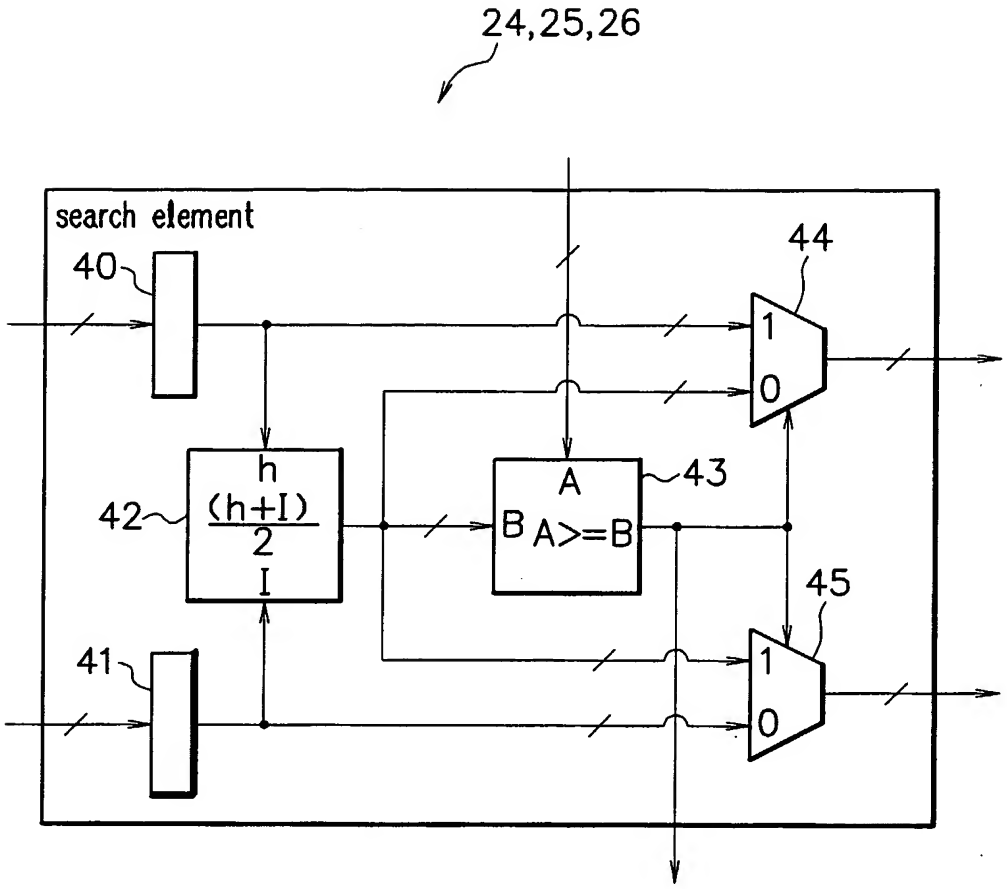


FIG. 7

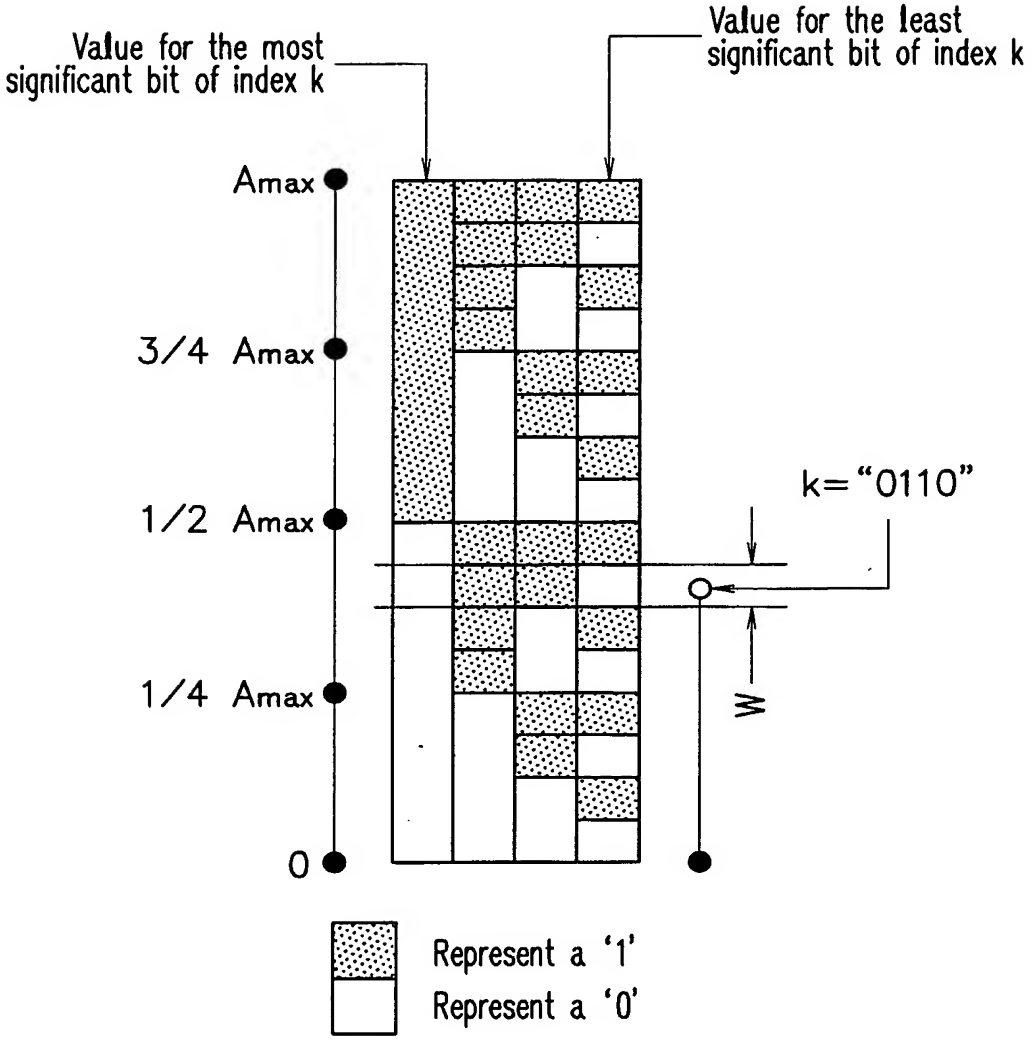
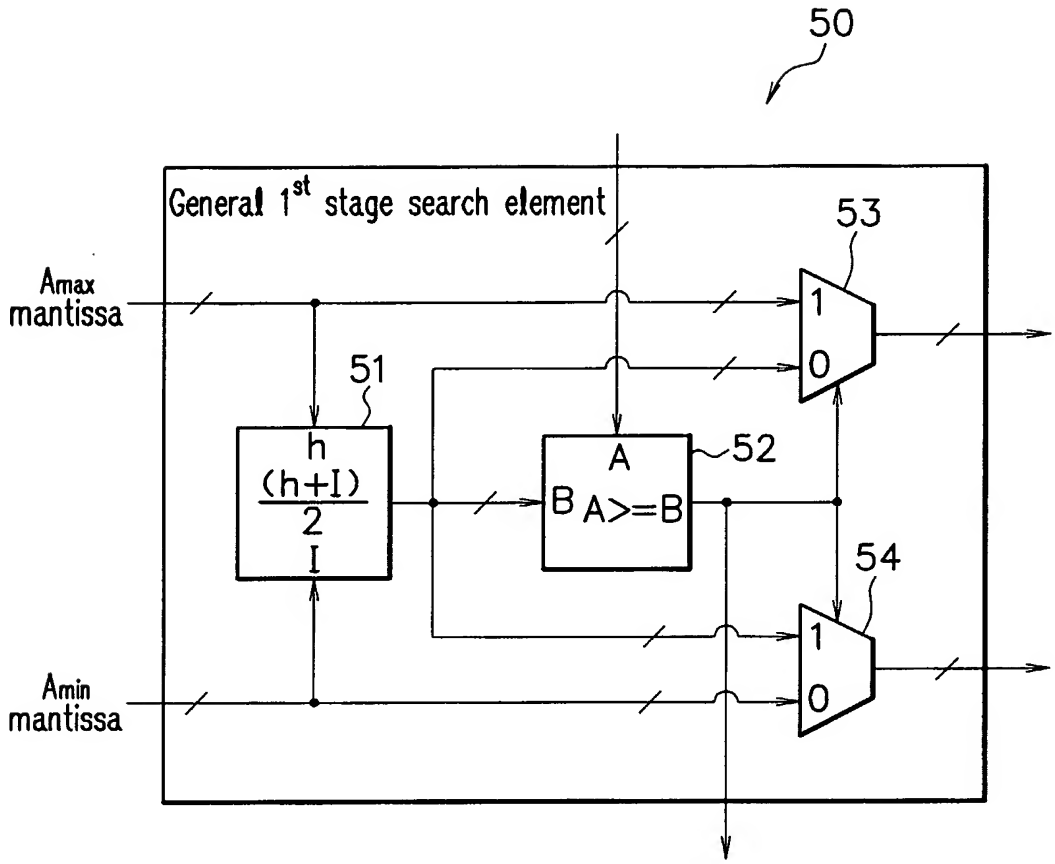

Value for the most significant bit of index k
Value for the least significant bit of index k
Amax
3/4 Amax
1/2 Amax
1/4 Amax
0
k="0110"
W
Represent a '1'
Represent a '0'

FIG. 8


50
General 1st stage search element
53
Amax mantissa
1
0
51
h
(h+I)
2
I
A
B A>=B
52
54
1
0
Amin mantissa